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• 研究人員	韓柏檉；簡伶朱；陳俊榮 Bor-Cheng Han；Ling-Chu Chien；Jun-Rong Chen		
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• 中文摘要

在歐美先進國家中,微量金屬在某些魚類及無脊椎動物的可食限量,皆已詳細記載、制定規範實施,但台灣有關這方面的制度仍有待建立,況且水產食品對台灣許多人而言,是一項不可或缺的食物來源.到底目前國內魚貝類帶給人民除了營養價值之外,是否有安全衛生上的顧忌及影響,故本研究目的在於對全台灣東西部魚蝦貝類之安全衛生進行全盤性了解,並以台灣沿岸之漁民及一般民眾爲訪視對象,進行飲食問卷調查,進而估算其每日金屬暴露量,並與美國 EPA 所定的安全攝取量做一比較.結果得知漁民的平均每日牡蠣及蝦類攝取量,爲一般民眾的二倍多;魚類攝取量則差不多.另外,分析全台灣東西部沿岸港口魚貨批發市場所採之魚貝類的金屬濃度,得知貝類中所含金屬濃度幾乎都高於魚蝦類,尤以鎘濃度爲最,其次是銅.就個體而言,含鎘量最高的爲曼達平魟(1722 ppb),含鉛量最高的爲海瓜子簾蛤(676 ppb),含砷量最高的爲鳳螺(7.31 ppm),含銅量最高的亦爲鳳螺(110 ppm),而含鋅量最高的爲牡蠣(165 ppm).此外,又以鳳螺較其他魚貝類所含高濃度金屬的頻率爲最.至於每日金屬暴露量,不論是漁民或一般民眾大多皆在安全建議值之內.

• 英文摘要

The acceptable daily intake (ADI) of trace metals in fishes and invertebrate is well established and regulated in developed countries, but it is not in Taiwan. Aquatic product is one of the major foodstuffs in Taiwan. To know if aquatic product scruples to our health in addition to its nutrition, we surveyed aquatic product and studied its safety and possible detriment to residents. We also estimated the daily intake of metals of fishermen and the general public using an inquiry form and compare the estimated daily intake with ADI established by USEPA (United States Environmental Protection Agency). According to our preliminary data, fishermen eat twice

amount of oyster and shrimp than regular public but no significant difference in fish intake. After analyzing metal concentration of aquatic product sampled from different markets, we found that shellfish contains higher concentration of metals than fish and shrimps. Among these metals, Cadmium (Cd) is the highest, then Copper (Cu). Among different species, Urotrygon mundus、Paphia undulata、Babylonia areolata and Crassostrea gigas has the highest concentration of Cd (1722 ppb)、Pb (676 ppb)、As (7.31 ppm)、Cu (110 ppm) and Zn (165 ppm), respectively. In addition, it is more frequent to observe that Babylonia areolata contains higher metal concentration than other species. As for the daily intake, there's no significant difference between fishermen and regular public, which are lower than the ADI from USEPA.